

## Full Term Pregnancy in A Septum Uterus: A Case Report

Fatima Zahra Gounain\*, Nisrine Mamouni, Sanaa Errarhay, Chahrazad Bouchikhi, Banani Abdelaziz

Gynecology-Obstetrics Department I, Chu Hassan II in Fez, Morocco

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\*Corresponding author: Fatima Zahra Gounain

### Abstract

The septate uterus is the most common uterine malformation, accounting for 30 to 50% of cases, followed by uterine malformations such as bicornuate uterus and unicornuate uterus. We report a case of a total septate uterus suspected during the obstetric examination of a patient in labor 37 weeks of amenorrhea and during an obstetric ultrasound of the term. The interest of this case is to show the obstetrical prognosis in fertile women with this uterine malformation.

**Keywords:** Malformation, septum, bicornuate, septate, delivery route, primiparous.

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### INTRODUCTION

Uterine malformations are relatively frequent, affecting 3 to 4% of the female population [1-3]. The exact prevalence since many of these malformations are asymptomatic and imaging techniques such as 3D ultrasound, 3D hysterosonography and MRI have only been available for a few years [2, 4]. Uterine malformations seem to be diagnosed more frequently in certain groups of patients, for example during follow-up for infertility or for recurrent miscarriages [2,5]. Among them, we find uterine malformations, in particular partitioned uterus which can be discovered during an imaging examination or during a surgical intervention, or even, as in our case, suspected during an obstetrical examination and confirmed by uterine exploration during uterine revision after vaginal delivery.

While many of these malformations remain asymptomatic, they should be considered in all adolescent girls consulting for dysmenorrhea, primary amenorrhea, pelvic pain or dyspareunia. Likewise, it is essential to look for a uterine malformation in a patient with a history of recurrent miscarriages, late miscarriages or premature delivery, as well as in patients consulting reproductive medicine.

### PATIENT AND OBSERVATION

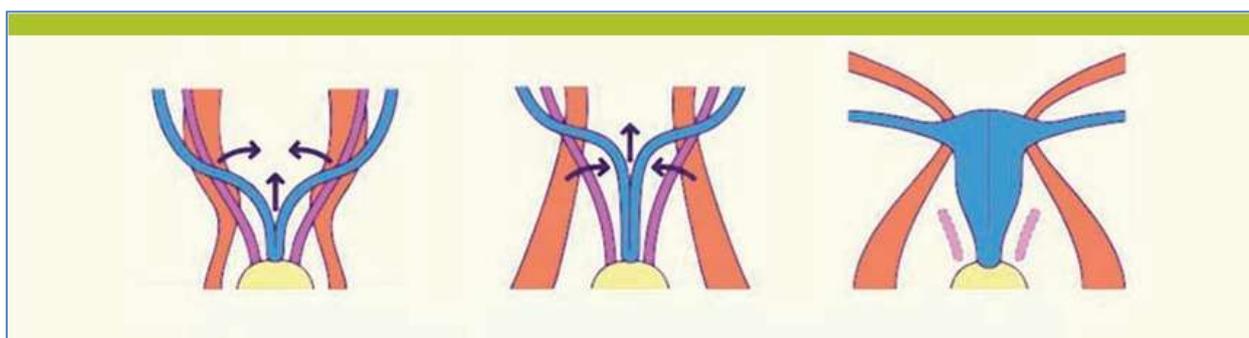
This is Mrs. FK, a 32-year-old primigravida O RH + group with no particular history, no history of urinary pathology, no primary dysmenorrhea or

dyspareunia, menarche at 11 years; regular cycle 5 days out of 30, no problem with infertility married for 1 year, admitted to 37SA for taking charge of her delivery in maternity emergency rooms. The general examination found a conscious patient in good general condition; normal tense and afebrile. The obstetrical examination finds a uterine height 30 cm from the positive and regular fetal heart sounds. Speculum examination and vaginal examination found a vaginal septum with a 2 cm dilated cervix, 80 percent erased with incomplete breech presentation, membranes were intact clinically normal pelvis. The realization of a scannopelvimetry is obligatory for the delivery route, returning to normal with a magnin index of 245 and the normal bispinous diameter, the low route is therefore accepted under close surveillance allowing a newborn female child to be obtained Apgar 10/10, weighing 2900g. Artificial delivery was performed with uterine revision which confirms the malformation and which objectified an asymmetric uterus with 2 half-matrices, one containing the pregnancy larger than the other, a single cervical opening, and resected vaginal septum at full dilation. No therapeutic action on the malformation was performed. The post-perfume was unremarkable and an uro-scanner was requested to detect any associated urinary malformation and returned without abnormalities

## DISCUSSION

The prevalence of congenital uterine anomalies in the population is estimated between 1 and 4% depending on the studies [2,4]. Although this prevalence remains inaccurate given the asymptomatic characteristics of these malformations. The diagnosis is most frequently made in patients followed for infertility, for repeated miscarriages or for premature deliveries, in our case the patient was asymptomatic in her life and during this pregnancy and the diagnosis was made at the clinical examination made. On admission to take charge of her full term delivery. It remains important to discuss the diagnosis in adolescents who consult for primary amenorrhea, dysmenorrhea or dyspareunia. The organogenesis of the genitourinary tract makes it possible to interpret and classify genital

malformations. Four phases can be schematized: the first urinary phase (3rd, 4th and 5th weeks) comprises the formation of Wolff's ducts and their progression towards the cloaca, the development of ureteral buds in the direction of renal blastemas; the second phase, genital and urinary (6th, 7th, 8th and 9th weeks) comprises the completion of the urinary system by the ascent and rotation of the kidneys, from the 9th week urinary organogenesis is therefore completed; the formation of Müller's ducts and their progression to the genital sinus may begin; the third genital phase of the joining of the two Müllerian canals takes place over the 10th, 11th and 12th weeks; this phase is responsible for the external morphology of the genital tract; the fourth and last phase is that of resorption of the wall adjoining the Müllerian canals (13th to 17th week).



**Fig-1: Différenciation des voies génitales féminines de la 6e à la 17e semaine. En bleu les canaux de Müller, en violet les canaux de Wolff**  
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Resorption begins at the level of the isthmus before the end of the mating phase, extends rapidly downwards and slowly upwards. This resorption phase is responsible for the internal morphology of the genital tract. The type of malformations is related to the date of onset of the teratogenic agent during organogenesis. Uterine aplasia, a unicornuate uterus with unilateral renal agenesis; by the sixth week, the Müllerian canal develops. An abnormality appearing between six and nine weeks will result in a pseudo-unicorn uterus. Between ten and thirteen weeks, the two Müllerian

ducts move closer to the midline. The anomalies observed are a defect in the fusion of the two Müllerian ducts, at the origin of the bicornuate uterus; after thirteen weeks, there is a disturbance of resorption of the septum causing the septate uterus. The classification of uterine malformations The most widely used in France is the Muset classification, established in 1964 [4]. The international classification is that of the American Fertility Society (AFS) of 1988 [6]. It is the most used in the literature.

**Table-1: Tableau comparatif des classifications des malformations utérines**

Mécanisme embryologique	Classification de Musset (1964)	Classification de l'AFS (American Fertility Society) (1988)
Aplasies des canaux de Müller	Aplasia müllérienne bilatérale • Syndrome de Mayer-Rokitansky-Küster-Hauser	Type I Hypoplasie, agénésie
	Aplasia müllérienne unilatérale • Utérus unicorne • Utérus pseudo-unicorne	Type II Utérus unicorne
Troubles de la fusion des canaux de Müller	Utérus didelphe (bicorne bicervical)	Type III Utérus didelphe
	Utérus bicorne • Unicervical total • Unicervical corporéal • Unicervical fundique	Type IV Utérus bicorne
Troubles de résorption des canaux de Müller	Utérus cloisonné • Total • Subtotal • Corporéal • Fundique	Type V Utérus cloisonné • Type Va Partiel • Type Vb Total
	Utérus à fond arqué	Type VI Utérus à fond arqué
	Hypoplasie utérine	Type VII Utérus DES (Diéthylstilbestrol)

Uterine aplasia (AFS classes I and II) Complete bilateral aplasia: type 0: urinary and genital organs absent; type 1: two isolated ovaries absence of genitourinary system; type 2: type 1 with in addition 2 tubal blanks; type 3: consists of the annexes; Incomplete bilateral aplasia: Rokitansky-Kuster-Hauser syndrome (class Ic); complete unilateral aplasia: true unicorn (class Id); Incomplete unilateral aplasia: pseudo unicorn (classes Iib and Iic).

Hemi-uterus or hemimators (AFS classes III and IV) Bicervical bicornuate with unilateral menstrual retention; permeable bicervical bicornuate; unicervical bicornuate. Partitioned uterus (AFS classes V and VI) Total septate; subtotal septate; bodily septate; septate fundic; cervical septum

Communicating uterus (AFS class II) Total communicating partition; communicating bicervical bicornuate with unilateral menstrual retention; cloisonné communicating body and bicervical

Apart from pregnancy, the uterine malformation can be discovered as part of a primary amenorrhea assessment; disabling primary dysmenorrhea; infertility of infertility; repeated premature deliveries, dyspareunia. The abnormality discovered during the physical examination may be: an absence of a vagina; bulging of the side wall of the vagina; a vaginal septum; cervical bifidity or even the absence of a cervix [6]. During pregnancy, it may be necessary to diagnose a malformation: during a premature termination of the pregnancy; in front of a repetitive obstructed presentation; during an accident

during delivery (hemorrhage or retention); and more rarely before the occurrence accidents: hemoperitoneum by rupture of a rudimentary gravid uterine horn of a pseudo-unicornuate uterus; or acute abdominal syndrome, by twisting of a pregnant uterus (congenital ligament absence). In our case, the patient was discovered at term during the examination made on admission for the management of her childbirth.

In the assessment of a genital malformation The different techniques used are 2D or 3D ultrasound, hysterosonography, hysterosalpingography, MRI, hysteroscopy and laparoscopy [7]. These different techniques can be combined with each other. 3D ultrasound and MRI are currently the techniques showing the best results in terms of sensitivity and specificity [8,9]. The evaluation of uterine malformations must be supplemented by renal imaging to detect frequently associated urinary tract malformations. Ultrasound must always be performed, because it is the only exploration that allows a precise endo- and exo-uterine evaluation. In routine practice, its sensitivity remains low (30 to 40%) and directly linked to the experience of the sonographer. On the other hand, oriented, in particular in the context of an infertility assessment, it must make it possible to define the existence or not of a partition; in this case, hysteroscopy should be preferred to hystero-graphy. The evaluation of the uterine septum (height, thickness, vascularization) and associated lesions is indeed more relevant in direct vision than through an X-ray screen. Laparoscopy should be performed exceptionally and reserved only for observations where the diagnosis remains hesitant between a partitioned uterus and a bicornuate uterus.

When the diagnosis of uterine malformation is made in early pregnancy, treatment will only be preventive (rest, lung maturation, ultrasound monitoring of fetal growth and cervical competence) [10]. Cervical cerclage should

only be offered in cases of proven cervical incompetence, which is observed in 25-30% of uterine malformations [11-13].

**Table-2: Avantages et limites des techniques d'imagerie dans le diagnostic de malformations utérines**

Techniques	Avantages	Limites
Echographie 2D transabdominale	Examen non invasif, facile d'accès, permet l'évaluation d'anomalies urinaires associées. Examen à effectuer en 2e phase de cycle menstruel ou en début de grossesse (meilleur contraste de l'endomètre avec le myomètre adjacent)	Pas approprié (ne permet pas la différenciation précise des différentes malformations utérines)
Echographie 2D endovaginale	Améliore la visualisation en raison d'une fréquence plus élevée et en évitant le tissu graisseux sous-cutané	Opérateur-dépendant
Hystérosonographie	Améliore l'information obtenue par échographie endovaginale. Fournit des informations sur la perméabilité tubaire	Opérateur-dépendant
Echographie 3D transvaginale	Acquisition immédiate et enregistrement de volumes. Analyse rétrospective des données enregistrées. Les fonctions multi-plans et de rendus permettent d'évaluer la forme de la cavité utérine. Les coupes coronales permettent l'analyse de la relation entre endomètre et myomètre du fond utérin et évaluent les cornes utérines. Evaluation des contours externes utérins. Délimitation du canal cervical. Visualisation interactive en l'absence du patient. La rotation et la magnification du volume permettent l'exploration détaillée de la cavité utérine. Réduction du temps d'imagerie ; consultation en réseau et échange de données [9, 10]	Temps nécessaire pour l'apprentissage de la manipulation de données de volume 3D ; effets d'ombre causés par des fibromes utérins et/ou des lésions endométriales peuvent être la cause de faux-négatifs
Sonohystérographie 3D	Mêmes avantages que pour l'échographie 3D. Facilite la visualisation de lésions intracavitaires. Réduction du temps d'examen (moins de douleurs en raison du temps réduit pendant lequel la cavité doit rester distendue)[11,12]	
IRM	Permet une classification correcte des malformations utérines. Permet dans le même temps l'évaluation de l'appareil urinaire et la recherche de lésions d'endométriose. Donne des informations sur la morphologie de la cloison (tissu fibreux ou myomètre). Peut faciliter le choix de la méthode chirurgicale appropriée [5,7]	Coûts élevés. Manque d'information sur la perméabilité tubaire. N'a pour l'instant pas démontré une supériorité par rapport à l'échographie 3D
Hystérosalpingographie	Donne des informations sur la cavité utérine. Permet une évaluation de la perméabilité des trompes. Utile pour vérifier les résultats opératoires [13]	Douleurs liées à la procédure. Complications : PID, exposition à des rayons et produit de contraste
Hystérocopie	Permet une évaluation directe d'anomalies intra-utérines. Permet le traitement au moment du diagnostic	Méthode invasive. Ne livre pas d'informations sur la perméabilité tubaire ni sur la morphologie externe de l'utérus. Risque d'infection, de saignement
Hystérocopie associée à la laparoscopie	Permettent le diagnostic différentiel d'un utérus cloisonné et d'un utérus bicorne. La laparoscopie permet de monitorer la chirurgie hystérocopique et de réduire le risque de perforation. Elle permet également le diagnostic et le traitement de pathologies pelviennes coexistantes (telles que lésions d'endométriose). Utilisation dans les bilans d'infertilité	Méthodes invasives. Morbidité augmentée

The indication for endoscopic surgical treatment of the uterine partitions has currently obtained general consensus. It is in fact a simple intervention whose morbidity is not important which leads to reduced hospitalization and whose results are comparable to those of abdominal hysteroplasty. The indications have therefore changed. Currently, the indication for endoscopic surgery seems to be offered more quickly (late but also early abortion), sometimes even in the absence of an obstetrical history.

The teams interested in medically assisted procreation and the systematic treatment of the entire realization of a medically assisted procreation. However, the indication for endoscopic hysteroplasty should not be generalized to all cases of partitioned uterus for the following reasons: the outcome of a pregnancy can never be formally predicted in the presence of a uterus. partitioned. Observations of pregnancy progressing normally until term, the birth of children of normal weight or even macrosomia despite the handicap of a uterine septum, justify a certain caution in the systematic indications of endoscopic section of a uterine septum; the subsequent fertility prognosis is sometimes hampered by iatrogenic morbidity: destruction of a tubal ostium, weakening of the uterine fundus with rupture uterine in subsequent pregnancy; the course of pregnancies is almost normal in the presence of a total septate uterus. The recommended indications for endoscopic hysteroplasty are guided by the obstetric history and anatomical condition: history of late and semi-late spontaneous

abortion (after the 12th week); history of spontaneous abortion of the 1st trimester after having eliminated a chromosomal or hormonal origin; persistent infertility in the absence of other factors that may explain infertility; obstructed presentation leading to cesarean section; partial uterine septum. Principle hystoplasties are not recommended in the absence of a history of obstetrics and infertility and in the presence of a uni- or bicervical total uterine septum.

## CONCLUSION

Congenital uterine malformations are relatively common and often asymptomatic. Their exact impact remains difficult to assess. They can manifest as gynecological disorders or have an impact on reproduction. Each clinician should look for a utero-vaginal malformation in the presence of primary amenorrhea, abdominal pain, recurrent miscarriages and in certain adverse obstetric outcomes. Their diagnosis and the evaluation of a prognosis require a specific assessment (3D ultrasound, hysterosonography, MRI). Hysteroscopic treatment of septate uterus appears to be of benefit. Although many cases lead to pregnancy, psychological management may be necessary for some patients, especially for malformations that are incompatible with pregnancy such as MRKH and / or have an impact on sexuality. It should be remembered that when diagnosing uterine malformation, urinary tract imaging should be performed due to the frequent associated abnormalities



Fig-2: Ultrasound image showing septate uterus in full term pregnancy with V bladder

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